

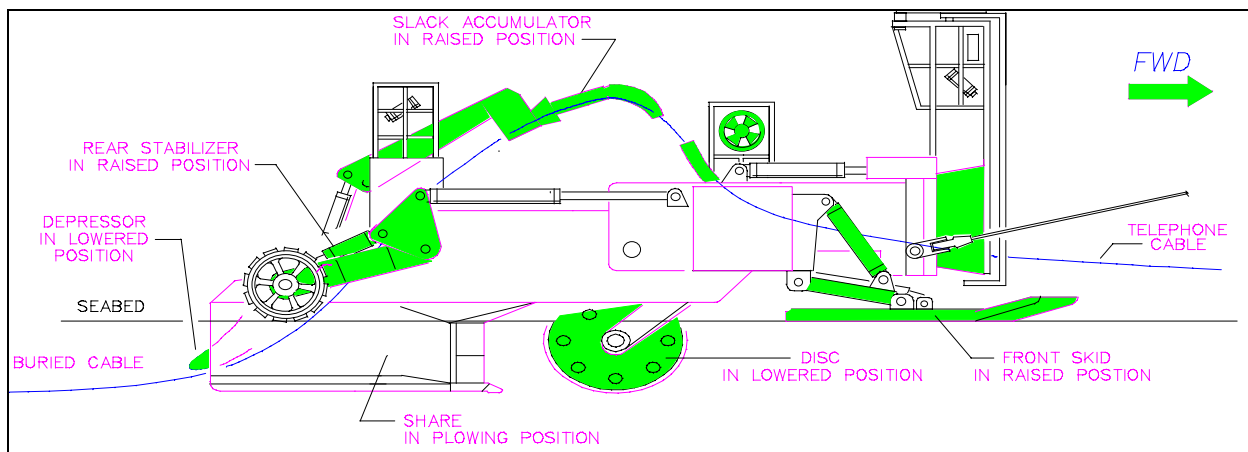
sonar, and other electronic sensors and controls. Appendix C contains additional technical detail on the Sea Plow VII.

The total width of the sea plow is 4.6 m including skids and rear stabilizers, which have wheels attached at their ends. The ground bearing of the plow on the sea bed is approximately 400 pounds per square inch (lb/in^2). This is the static load of the plow as it rests on the sea bed based on its submerged weight. This does not include the tow cable tension, which would induce an upward lift on the plow. It also does not consider that uplift of the plow tip or plow share uplift that is generated during plowing operations. The plow is designed such that during plowing, the weight of the plow rests on the plow share to achieve maximum penetration. Thus, the bearing on the sea bed from the plow during installation operations is significantly decreased by these operational factors (360networks, inc. 2000c).

The skids and rear wheels prevent significant disturbance of the sediment and the settlement of the plow into the sediment during the cable laying process. Thus, the net impact of the cable installation process by direct plow technique proposed is the temporary dislocation of a wedge of soil 1.0 m wide at the sea bed surface. Total area of disturbance within the Stellwagen Bank NMS is estimated at 1.0 m wide by 19.5 km long or approximately 4.8 acres of disturbance.

At the beginning of burial operations, the cable is loaded into the sea plow while the sea plow is onboard the cable ship. The sea plow then is lowered to the ocean bottom (with the cable already inside the plow). That operation causes a small section of cable, where the sea plow initiates burial, to be exposed during plow operations. After the cable has been installed, the exposed areas are buried by a remotely-operated vehicle (ROV), such as a submersible craft-assisting repair and burial (SCARAB) vehicle. At the completion of the cable burial operations, the sea plow is retrieved and replaced onboard the cable ship. Figure 2-3 shows some key details in a starboard view of the Sea Plow VII in cable burial mode.

Figure 2-3: Sea Plow VII in Cable Burial Mode (Earth Tech 1999)



To ensure safety during the cable-laying process, a checklist is reviewed, and a project-specific plan is developed. The various operational phases are reviewed, and the possible risks posed by intrusion by pleasure boats and fishing vessels and other commercial traffic are determined. Appropriate security requirements for identifying and warning against or preventing such intrusions are identified. Such security requirements may include notice to mariners, patrol picket boats, aircraft fly-overs, and the placement of warning or marker buoys.

The cable-laying operations would be conducted 24 hours a day. The officers and crew of the cable ship routinely would take actions appropriate to the prevailing circumstances and conditions to conduct safe